

MAIZE METALLOTHIONEIN GENE AND PROMOTER

ABSTRACT OF THE INVENTION

5 The present invention provides compositions and methods for regulating
expression of heterologous nucleotide sequences in a plant. Compositions include a novel
nucleotide sequence for a root-preferred promoter for the gene encoding , a
metallothionein gene and sequences isolated therefrom. A method for expressing a
heterologous nucleotide sequence in a plant using the promoter sequences disclosed
10 herein is provided. The method comprises transforming a plant cell with a nucleotide
sequence operably linked to one of the root-preferred promoters of the present invention
and regenerating a stably transformed plant that expresses the nucleotide sequence in a
root-preferred manner from the transformed plant cell. Compositions and methods for
expressing metallothionein genes in plants, plant cells and tissues are also provided. The
15 compositions comprise nucleotide sequences encoding plant metallothionein. The
sequences are useful in transforming plants for tissue-preferred or constitutive expression
of metallothionein. Such sequences find use in modulating levels of metal ions in plants
and plant tissues.